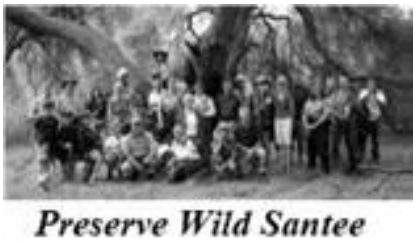

Letter RO-4

May 28, 2019

Sent via email (with references and attachments by FedEx)

Planning & Development Services
Attn: Greg Mattson, Project Manager
5510 Overland Avenue, Suite 310
San Diego, CA 92123
Gregory.mattson@sdcounty.ca.gov

Re: Comments on Otay Ranch Resort Village 13 Recirculated Draft Environmental Impact Report (State Clearinghouse No. 2004101058); Otay Ranch Resort Village, GPA04-003, REZ04-009, TM-5361, SP04-002, and ER LOG04-19-005

Dear Mr. Mattson:

RO-4-1 These comments are submitted on behalf of the Center for Biological Diversity, Preserve Wild Santee, and the California Chaparral Institute (collectively, the "Center") regarding the Recirculated Draft Environmental Impact Report ("RDEIR") for the Otay Ranch Resort Village 13 Project and associated approvals ("Project"). The Center has reviewed the Draft Environmental Impact Report ("DEIR") in conjunction with the RDEIR (collectively, the "EIR") and is deeply concerned that the County's environmental review of the Project is deficient and fails to adequately analyze or mitigate for the Project's significant environmental impacts. The Center urges the County to correct the deficiencies identified in this letter and recirculate a new revised Draft EIR for public comment prior to preparing a Final EIR for the Project. These comments are submitted in addition to our May 22, 2015 comments on the DEIR for the Project (Attachment 1).

RO-4-2

RO-4-3 The Center for Biological Diversity is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has 1.4 million members and supporters throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, wildlife connectivity, open space, air and water quality, and overall quality of life for people in San Diego County.

RO-4-4 Preserve Wild Santee is a volunteer community environmental organization that has worked to protect and enhance the quality of life and preserve natural resources in the City of Santee and adjoining areas since 1994. Preserve Wild Santee's members offer input into local land use decisions in an effort to produce better development projects with fewer environmental and fire safety impacts.

RO-4-5 The California Chaparral Institute is a 501(c)(3) nonprofit education, research, and advocacy organization dedicated to the preservation of native shrubland habitats throughout the West and supporting the creative spirit as inspired by nature.

RO-4-6 CEQA and the CEQA Guidelines impose numerous requirements on public agencies proposing to approve or carry out projects. Among other things, CEQA mandates that significant environmental effects be avoided or substantially lessened where feasible. (Pub. Res. Code § 21002; CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d).) Unfortunately, the RDEIR for the Project fails to comply with CEQA and the CEQA Guidelines in numerous respects.

I. The EIR's Analysis of and Mitigation for the Project's Greenhouse Gas Emissions Is Inadequate.

RO-4-7 The EIR's analysis of the proposed Project's GHG emissions (RDEIR Section 2.10) is inadequate. The Project would result in significant amounts of GHG emissions during construction and operation of the Project. (See RDEIR 2.10-34, Table 2.10-4 [total annual construction emissions of 37,973 MT per year; annual operational emissions of 33,791MT per year].) The EIR's approach violates CEQA's requirement that an EIR fully analyze and attempt to mitigate all significant direct and indirect impacts of a project. (CEQA Guidelines § 15126.2; Pub. Res. Code § 21002.)

A. Climate Change Is a Catastrophic and Pressing Threat to California.

RO-4-8 A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and that the threats from climate change are becoming increasingly dangerous. The Intergovernmental Panel on Climate Change ("IPCC"), the leading international scientific body for the assessment of climate change, concluded in its 2014 Fifth Assessment Report that: "[w]arming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen," and further that "[r]ecent climate changes have had widespread impacts on human and natural systems." (IPPC 2014, p. 2) These findings were echoed in the United States' own 2014 Third National Climate Assessment and 2017 Climate Science Special Report, prepared by scientific experts and reviewed by the National Academy of Sciences and multiple federal agencies. The Third National Climate Assessment concluded that "[m]ultiple lines of independent evidence confirm that human activities are the primary cause of the global warming of the past 50 years" (Melillo et al. 2014, p. 7) and "[i]mpacts related to climate change are already evident in many regions and are expected to become increasingly disruptive across the nation throughout this century and beyond." (Id. at 10.) The 2017 Climate Science Special Report similarly concluded:

> [B]ased on extensive evidence,…it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence.
>
> In addition to warming, many other aspects of global climate are changing, primarily in response to human activities. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor.

(USGCRP 2017, p. 10.)

The U.S. National Research Council concluded that "[c]limate change is occurring, is caused largely by human activities, and poses significant risks for—and in many cases is already affecting—a broad range of human and natural systems." (NRC 2010, p. 2.) Based on observed and expected harms from climate change, in 2009 the U.S. Environmental Protection Agency found that greenhouse gas pollution endangers the health and welfare of current and future generations. (74 Fed. Reg. 66496 (Dec. 15, 2009) [U.S. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule].)

RO-4-9

These authoritative climate assessments decisively establish the dominant role of anthropogenic GHG emissions in driving climate change. As the Third National Climate Assessment explains: "observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases." (Melillo et al. 2014, p. 2; *see also id.* at 15 [Finding 1: "The global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels."].) The Assessment makes clear that "reduc[ing] the risks of some of the worst impacts of climate change" will require "aggressive and sustained greenhouse gas emission reductions" over the course of this century. (Id. at 13-14, 649; *see also id.* at 15 [Finding 3: "Human-induced climate change is projected to continue, and it will accelerate significantly if global emissions of heat-trapping gases continue to increase."].)

The impacts of climate change will be felt by humans and wildlife. Climate change is increasing stress on species and ecosystems—causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes—in addition to increasing species extinction risk. (Warren et al. 2011.) Climate-change-related local extinctions are already widespread and have occurred in hundreds of species. (Weins 2016.) Catastrophic numbers of species extinctions are projected to occur during this century if climate change continues unabated. (Thomas, et al. 2004; Maclean et al. 2011; Urban 2015.) In California, climate change will transform our climate, resulting in impacts including, but not limited to, increased temperatures and wildfires and a reduction in snowpack and precipitation levels and water availability.

Therefore, immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming well below 2°C above pre-industrial levels. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO_2 must remain below about 1,000 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 2°C above pre-industrial levels, and to 400 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 1.5°C. (IPPC 2013, p. 25; IPPC 2014, pp. 63-64, Table 2.2.) These carbon budgets have been reduced to 850 $GtCO_2$ and 240 $GtCO_2$, respectively, from 2015 onward. (Rogeli et al. 2016, Table 2.) Given that global CO_2 emissions in 2016 alone totaled 36 $GtCO_2$ (Le Quéré et al. 2017), humanity is rapidly consuming the remaining carbon budget needed to avoid the worst impacts of climate change. As of early 2018, climate policies by the world's countries would lead to an estimated 3.4°C of warming, and possibly up to 4.7°C of warming, well above the level needed to avoid the worst dangers of climate change. (Climate Action Tracker 2017.)

RO-4-10

The United States has contributed more to climate change than any other country. The U.S. is the world's biggest cumulative emitter of GHGs, responsible for 27 percent of cumulative global CO_2 emissions since 1850, and the U.S. is the world's second highest emitter on an annual and per capita basis. (World Resources Institute 2014.) Nonetheless, U.S. climate policy is wholly inadequate to meet the international climate target to hold global average temperature rise to well below 2°C above pre-industrial levels to avoid the worst dangers of climate change. Current U.S. climate policy has been ranked as "critically insufficient" by an international team of climate policy experts and climate scientists. (Climate Action Tracker 2018.)

RO-4-11

In response to inadequate action on the national level, California has taken steps through legislation and regulation to fight climate change and reduce statewide GHG emissions. Enforcement of and compliance with these measures is essential to help stabilize the climate and avoid catastrophic impacts to our environment. AB 32 mandates that California reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code § 38550.) Based on the warning of the IPPC and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emissions reductions to 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is line with a previous Executive Order mandating the state reduce emission levels to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the legislature has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.

RO-4-12

The legislature has found that failure to achieve GHG emissions reductions would be "detrimental" to California's economy. (Health & Saf. Code § 38501(b).) In his 2015 Inaugural Address, Governor Brown reiterated his commitment to reduce greenhouse gas emissions with three new goals for the next fifteen years:

- To increase electricity derived from renewable sources to 50 percent;
- To reduce petroleum use in cars and trucks by 50 percent;

- To double the efficiency of existing buildings and make heating fuels cleaner.

(Brown 2015.) In 2018, Governor Brown issued Executive Order B-55-18, in which he declared it to be a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter."

RO-4-13

Although some sources of GHG emissions may appear insignificant in isolation, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 ["the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct].) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, project-specific GHG emissions disclosure, analysis and mitigation is vital to California meeting its climate goals and maintaining our climate.

B. The EIR Fails to Adopt All Feasible Mitigation Measures to Reduce the Project's GHG Impacts to Less Than Significant Levels.

RO-4-14

In its readiness to rely on offsets in order to allow the Project Applicant to "buy its way out" of having *actually* to reduce the GHG emissions from the Project, the EIR fails to adopt feasible mitigation measures that could reduce the Project's GHG emissions. It is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.) Adoption of additional feasible mitigation measures during construction and operation of the Project would lower the Project's overall GHG emissions and its contribution to climate change.

RO-4-15

The EIR's utter failure to require feasible mitigation measures to reduce GHG emissions from the Project is made evident by a comparison with the similarly situated, similarly scaled, and adjacent proposed Otay Village 14 and Planning Areas 16 & 19 Project ("Otay Village 14 Project").[1] The Project will contain a total of 5,269 residents at buildout (DEIR at 1.0-3), and the EIR calculates its total annual construction GHG emissions to be 37,973 MT, and its annual operational emissions to be 33,791 MT. (RDEIR 2.10-34, Table 2.10-4.) The adjacent Otay Village 14 Project anticipates a total buildout of approximately 5,384 residents (Otay Ranch Village 14 and Planning Areas 16/19 Final Environmental Impact Report (State Clearinghouse No. 2016121042) at 1-29); the Final Environmental Impact Report for the Otay Village 14 Project estimates GHG emissions of total annual construction emissions of 22,760 MT per year and annual operational emissions of 16,348 MT per year (id. at 2.7-51). Figures 1 and 2, below, provide a side-by-side comparison of these emissions estimates.

[1] In providing this comparison to the Otay Village 14 Project, the Center endorses neither that project nor the adequacy of the associated environmental review.

Figure 1

	Total Annual Construction GHG Emissions (MT)	Total Annual Operational GHG Emissions (MT)
Otay Village 14 Project (5,269 residents at buildout)	22,760	16,348
Otay Village 13 Project (5,384 residents at buildout)	37,973	33,791
Total Percentage Difference	+66.8%	+106.7%

Figure 2

	Per Capita Annual Construction GHG Emissions (MT)	Per Capita Annual Operational GHG Emissions (MT)
Otay Village 14 Project (5,269 residents at buildout)	4.32	3.10
Otay Village 13 Project (5,384 residents at buildout)	7.05	6.31
Per Capita Difference	+63.2%	+103.5%

RO-4-16 The EIR offers no reason why total and per capita emissions are so much higher for the Otay Village 13 project, which will have nearly the same number of residents but over 60% more total and per capita construction emissions and over 100% more total and per capita operational emissions than the Village 14 Project. This is clear evidence that the Project has failed to adopt construction and design measures that are practicable and feasible and that will reduce the Project's considerable carbon footprint.

RO-4-17 As the EIR itself acknowledges, where CEQA requires a project to adopt mitigation to reduce GHG emissions, the California Air Resources Board "recommends that lead *agencies prioritize on-site design features that* ***reduce*** *emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally*." (RDEIR at 2.10-7 [emphases added].)

RO-4-18 The EIR's failure to include mitigation to reduce the Project's emissions from vehicle miles traveled ("VMT") is particularly troubling. Vehicles are the primary source of operational emissions, accounting for 71.7% (24,241 MT) of the Project's total operational emissions of

33,791. (RDEIR at 2.10-39, Fig. 2.10-4) Incredibly, the EIR proposes to reduce this source of emissions by only 1,203 MT annually—a reduction of less than 5%. (Id.) The EIR purports to accomplish this paltry reduction through adoption of mitigation measure M-GCC-1. But the measure boils down to a suite of aspirational, unenforceable, vague, and deferred actions that do not satisfy CEQA's requirements for mitigation. (*See Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1027 (substantial evidence of mitigation measures' effectiveness and enforceability must be included in the record).) For example, the few measures that entail actual design features (bicycle trail system, bicycle racks, and "traffic calming features") are described only in the broadest of terms and need only be provided "to the satisfaction of the County of San Diego Department of Planning & Development Services Department." (RDEIR at 2.10-28. The few additional measures, which include "provid[ing]… information for residents regarding transit options" and "promot[ing] information regarding SANDAG's iCommute program" and "encourage[ing] formal/informal networks among residents that arrange carpools" (id.) are so vague and unenforceable as to be virtually worthless. Accordingly, mitigation measure M-GCC-1 improperly defers mitigation and fails to meet CEQA's standards for concrete, enforceable mitigation whose effectiveness is supported by substantial evidence in the record.

RO-4-19

Yet there are numerous feasible transportation-related measures that could considerably reduce VMT. The California Air Pollution Control Officers Association ("CAPCOA") has prepared a list of suggested mitigation measures to be considered by lead agencies approving projects with potentially significant GHG emissions. CAPCOA 2010 Quantifying Greenhouse Gas Mitigation Measures: *A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures,* available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf (excerpt included as Attachment 2). The list includes transportation-focused measures that the EIR should analyze, including, for example, providing local shuttles and installing Park-and-Ride lots. *See id*.[2] The EIR's failure to actually commit the Project Applicant to ensuring that viable transit options will be implemented as part of the Project is evident.

RO-4-20

Thus, the EIR fails to include substantial evidence demonstrating it has adopted all feasible mitigation measures to reduce its GHG emissions, in violation of CEQA. The County must either consider and adopt all feasible mitigation measures, or adopt findings regarding why it is infeasible to mitigate the Project's significant GHG emissions. This failure additionally undermines California's ability to meet its GHG reduction targets. Mitigation of a project's environmental impacts is one of the "most important" functions of CEQA. (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.) The County's abandonment of its responsibility will only hasten the impacts of climate change and further imperil California's wildlife, water, communities and ecosystems.

RO-4-21

[2] Other potential feasible mitigation measures include but are not limited to: car sharing programs, a transportation center that brings together various modes of public transport, and building bus stops early on in Project construction.

C. The EIR's Reliance on Offset Purchases to Mitigate the Vast Majority of the Project's GHG Emissions Is Flawed.

RO-4-22

The EIR proposes to use the purchase of carbon offset credits as mitigation for the vast majority of the Project's carbon emissions. (*See* RDEIR at 2.10-39 [Fig. 2.10-4], 2.10-20-35 [measures M-GCC-7 and M-GCC-8].) Accordingly, it concludes that "with implementation of mitigation, the Project achieves carbon neutrality (i.e., a net zero emissions level), thereby resulting in no net increase in GHG emissions relative to existing environmental conditions." (RDEIR at 2.10-26.) This approach raises significant concerns.

RO-4-23

Measures requiring the purchase of offset credits operate, effectively, as a mitigation fee. CEQA allows for mitigation fees only where there is evidence of a functioning, enforceable, and effective implementation program. For example, courts have found mitigation fees inadequate where the amount to be paid for traffic mitigation was unspecified and not "part of a reasonable, enforceable program" (*Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1189); where a proposed urban decay mitigation fee contained no cost estimate and no description of how it would be implemented (*California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 198 (*Woodland*)); and where there was no specific traffic mitigation plan in place that would be funded by mitigation fees. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1122 (*Gray*).)

The EIR's reliance on offsets falls short in numerous ways. First, it fails to provide evidence that qualifying offsets will include only those that function in a manner that will result in actual, effective mitigation, and defers the decision regarding what instruments qualify to a third-party accrediting organization. (RDEIR 2.10-31.)

RO-4-24

Second, the EIR fails to provide evidence that a sufficient *quantity* of GHG offset credits is available from existing, functioning programs to mitigate the Project's emissions, and that they will continue to be available as needed in the future. A substantial number of offset credits will be required to mitigate the Project's GHG emissions to "net zero." The mitigation includes no fallback provisions in the event that the requisite number of qualifying credits is not available for purchase by the Project Applicant.

RO-4-25

Third, The EIR does not ensure that the offsets purchased to mitigate the Project's impacts will come from local, regional, or state GHG reduction projects. While the EIR claims the offsets will be "geographically prioritized" (RDEIR at 2.10-31), it grants the County Planning Director broad discretion to allow the Project Applicant to acquire credits on the national or international market instead. (Id.) Offsets on the international market can have dubious effectiveness and weak enforcement mechanisms, and as a result can be cheaper and more attractive to buyers. The DEIR fails to include the necessary measures to ensure that offsets are real, enforceable, additional, and otherwise consistent with CEQA's mitigation requirements.

RO-4-26

Fourth, the EIR's mitigation creates a "one-way ratchet" toward fewer environmental protections; the Project Applicant may at his/her election apply to the County for a so-called "true-up" after the Final EIR is certified to obtain a reduction in the number of carbon offsets it is required to purchase. (RDEIR at 2.10-34.) But there is no equivalent mechanism for *increasing*

the number of offsets required if the Project's operational GHG emissions exceed the EIR's projections.

RO-4-27

Fifth, and most troubling, the EIR's approach is indicative of a disturbing trend in the County: the continued approval of sprawling development projects that shift their GHG emission reduction requirements elsewhere. If the County continues to approve isolated, sprawling, and car-oriented development projects far from existing communities, the County will never be able to reduce its overall GHG emissions locally. Relying habitually on offsets undermines California's goals of *reducing* GHG emissions and combating climate change. That is why agencies typically permit offsets to constitute only a very small part of a given emission reduction program. (*See* Health & Safety Code § 38562(c)(2)(E) [California's cap and trade program allows no more than eight percent of GHG reductions to come from offsets, which will drop to four percent in 2021, at which point at least half of the offsets used "provide direct environmental benefits in state"]; Climate Action Reserve, Voluntary Offsets. Scoping Plan at 102 [CARB's 2017 Scoping Plan also prioritizes onsite measures: "[t]o the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally"].) The EIR's approach to addressing its significant GHG emissions not only violates CEQA but it is an irresponsible step in the wrong direction for the County.

D. The EIR Fails to Consider the Potentially Significant Environmental Impacts Resulting From Its Use of Offset Credit Programs as Mitigation.

RO-4-28

The EIR also fails to consider the potentially significant environmental impacts of its reliance on offset credits as mitigation. The Applicant's purchase of offsets will cause a direct physical environmental change because the purchases will fund the maintenance or creation of mitigation projects potentially all over the world. CEQA requires that an EIR must disclose and discuss any significant effects caused by a mitigation measure itself in addition to those that would be caused by the project as proposed. Guidelines § 15126.4(a)(1)(D). The EIR fails to discuss the potential environmental effects associated with relying on the purchase of out-of-County offsets to mitigate for the Project's GHG emissions. For example, Measures M-GCC-7 and M-GCC-8 allow offsets to be purchased from Verra, a carbon offset accrediting organization, which supplies or accredits offsets derived from, among other things, wind farms,[3] which, while producing renewable energy, can also have significant impacts on wildlife.

RO-4-29

Similarly, the American Carbon Registry—also an allowable source of offsets under Measures M-GCC-7 and M-GCC-8—accredits offsets generated by carbon capture and storage ("CCS") and reports on its website that "A typical CCS project consists of capturing, transporting, compressing and securely storing the CO_2 underground in depleted oil and gas fields or deep saline aquifer formations."[4] This process can itself have significant health and safety risks, including the potential to contaminate or degrade water supplies. (Fogarty 2010.)

[3] https://verra.org/project/vcs-program/projects-and-jnr-programs/

[4] https://americancarbonregistry.org/news-events/news/american-carbon-registry-approves-carbon-capture-and-storage-offset-methodology

The EIR must discuss the effects of funding and/or subsidizing—through the use of offsets—other "projects" that may themselves have considerable land use, biological, or other impacts.

E. The EIR's Reliance on Out-of-County Offsets to Mitigate the Project's Significant GHG Emissions Is Inconsistent With the General Plan and Violates the State Planning and Zoning Law.

RO-4-30

The State Planning and Zoning Law requires land use approvals like the Project to be consistent with the applicable General Plan. Gov. Code §§ 65300.5 (General Plan must be internally consistent), 65860(a) (zoning amendments must be consistent with General Plan), *Concerned Citizens of Calaveras County v. Board of Supervisors* (1985) 166 Cal.App.3d 90 (directing the County to set aside its adoption and approval of land use and circulation elements of the general plan).

The County's reliance on M-GCC-7 and M-GCC-8 to offset the Project's GHG emissions is inconsistent with General Plan Goal COS-20, which provides:

RO-4-31

> **GOAL COS-20 Governance and Administration.** Reduction of community-wide (i.e., unincorporated County) and County Operations greenhouse gas emissions contributing to climate change that meet or exceed requirements of the Global Warming Solutions Act of 2006, as amended by Senate Bill 32 (as amended, Pavley. California Global Warming Solutions Act of 2006: emissions limit).

COS-20 requires, on its face, that GHG reductions be made within the County. Yet M-GCC-7 and M-GCC-8 allow the Project Applicant to purchase offsets generated from anywhere in the world to mitigate for the increase in in-County emissions from the Project. (RDEIR 2.10-30 to -35.). This is plainly inconsistent with COS-20's in-County reductions requirement and therefore violates the State Planning and Zoning Law.

RO-4-32

Furthermore, the CEQA Guidelines require that an EIR "shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans." Guidelines § 15125(d). The EIR is deficient under CEQA because it incorrectly claims that the Project is consistent with COS-20. (EIR 2.10-24.) This claim is based on a deliberate misreading of COS-20—an interpretation that a judge of the San Diego County Superior Court has already rejected.

RO-4-33

As the County is aware, the Center for Biological Diversity, Sierra Club, and other petitioners successfully challenged the County's adoption of its Climate Action Plan in *Golden Door Properties LLC v. County of San Diego* (San Diego Superior Ct. Case No. 37-2018-00013324-CU-TT-CTL). In that case, the San Diego Superior Court issued a writ of mandate setting aside the County's approvals of the CAP and the accompanying environmental review document and enjoining the County from approving projects that rely on the defective off-site mitigation program. In an order dated December 24, 2018 (Attachment 3, "CAP Order"), Judge Taylor held as follows:

> [By adopting COS-20] the County incorporated a fundamental, mandatory and clear policy into both the 2011 and the 2018 iterations of the General Plan: that

> GHG emission reductions be local. In 2011, the County explicitly used the words "local GHG emissions." in COS-20. . . . This did not change in the 2018 amendment. The County's 2018 reiteration stated, again in COS-20, that the CAP should achieve GHG emissions from the "unincorporated County" and from "County operations."

CAP Order at p. 12 (citations omitted). The County's persistent use of off-site mitigation for projects' in-County GHG emissions, its reliance on a tortured and unsupported reading of COS-20 in order to do so, and its failure to acknowledge or analyze the Project's inconsistency with COS-20, all violate CEQA and the CEQA Guidelines.

RO-4-34

The County should not approve greenfield development projects—like this one—that will increase GHG emissions within the County, and it should withhold approval of this Project until it has developed and adopted a legally sufficient Climate Action Plan and can analyze and mitigate the Project's GHG emissions consistent with that plan.

RO-4-35

II. The EIR's Analysis of and Mitigation for the Project's Impacts to Biological Resources Remains Deficient.

The Center was disappointed to discover that the Recirculated Draft EIR did not contain a new, updated, and legally sufficient analysis of the Project's impacts to biological resources, and that the County's inadequate analysis remains unchanged from 2015—over four years ago. We submit these comments in addition to our letter of May 22, 2015 (Attachment 1), and incorporate herein the comments in that letter on the Project's impacts to biological resources.

RO-4-36

A. The EIR's Analysis of and Mitigation for Impacts to the Quino Checkerspot Butterfly Is Inadequate.

The Quino checkerspot butterfly (*Euphrdryas editha quino*) was probably one of the most abundant butterflies in southern California, but the butterfly has vanished from much of its former range. The species was once widespread from coastal Los Angeles County south to San Diego County, and western Riverside and southwestern San Bernardino counties. But its numbers and range have been dramatically reduced due to human impacts including urban development, livestock grazing, off-road vehicle use, fire management practices, predation by exotic invertebrates, and global climate change. (*See* May 22, 2019 Letter from C. Nogano and T. Cornelisse to G. Mattson Re Endangered Quino Checkerspot Butterfly and Otay Village 13 Project in San Diego County, California ["Quino Scientist Letter"], included as Attachment 4.)

RO-4-37

The Quino checkerspot exists in metapopulations or a "population of populations." (Id.) A metapopulation consists of an interdependent network of populations which are geographically separated from each other on "islands" or patches of suitable habitat surrounded by unsuitable habitat, and the survival of each is tied to the movement of animals between them. In "good" years with plentiful resources such as food, living space and optimal weather, all or most of the habitat patches will be occupied by the species, but in "bad" years, only a few patches which possess the suitable environmental conditions are inhabited by the animal. Patches that possess optimal environmental requirements and are occupied even in bad years are known as "core" populations. Patches that support animals only during good years are known as satellite

RO-4-38

populations. Loss of occupied or unoccupied patches used by satellite populations will fray the stability of a metapopulation, and continued losses will eventually affect its stability, but the loss of a patch containing a core population will have especially devastating effect, potentially affecting the persistence of the metapopulation itself.

As metapopulations of the Quino checkerspot were eliminated, the species disappeared from Los Angeles, Orange, and San Bernardino counties, prompting the USFWS to list it as endangered. Despite its protected status, unrelenting development and other threats continue throughout its range placing it ongoing peril of extinction.

RO-4-39

The Quino checkerspot has evolved a specialized biology and life history that allow it to survive in the hot dry summers and often wet winters of the Mediterranean climate of southern California. It can prolong its caterpillar stage through periods of extended drought by entering a prolonged resting state or dormancy. One scientist found the animal may be able to survive multiple years of adverse conditions through dormancy. Historically, "good" years with optimal environmental conditions the species had population booms in which there were many thousands of adults. In the 1950s, collectors described the Quino checkerspot as occurring on every coastal bluff, inland mesa top, and lower mountain slopes in San Diego County and coastal northern Baja California. Large populations also were observed during this period in Riverside and Orange counties. One of the last population booms occurred in San Diego County in the late 1970s. By the middle 1980s, more than 75% of its historical range and at least 95% of its coastal bluff and mesa habitat had been destroyed by urban development. The 1988 petition to list the butterfly as an endangered species suggested it was extinct. It was not until 1997 that scientists located an extant population.

1. The EIR Fails to Disclose that the Project Will Destroy "Core" Critical Habitat for the Quino Checkerspot Butterfly.

RO-4-40

The Quino checkerspot butterfly was federally listed as an endangered species in 1997 (62 Fed. Reg. 2313–2322 (Jan. 16, 1997)). Yet the EIR fails to adequately analyze the Project's impacts to federally designated critical habitat for the Quino checkerspot butterfly. While the EIR discloses that the Project would have direct and indirect effects on areas designated as critical habitat for the species, it does not acknowledge any potentially significant impacts associated with the destruction or adverse modification of this designated critical habitat. Critical habitat is designated as such because it is either occupied by the listed species and contains the "physical or biological features … essential to the conservation of the species" or unoccupied by the listed species but nonetheless deemed essential to the conservation of the species (16 U.S.C. § 1532(5)(A).). "Conservation" means the recovery and eventual de-listing of federally-listed species. (16 U.S.C. § 1532(3).)

RO-4-41

Specifically, the 2003 Recovery Plan for the Quino checkerspot butterfly explained that the species is experiencing a "long term decline due to human impacts." (USFWS 2003, p. iii.) The Recovery Plan found:

> Urban and agricultural development, invasion of nonnative species, habitat fragmentation and degradation, and other human-caused disturbances have resulted in substantial losses of habitat and declines in habitat suitability

throughout the species' historic range. Conservation needs include protection and management of landscape connectivity (habitat patches and intervening dispersal areas); habitat restoration and enhancement; and establishment of a formal Quino checkerspot butterfly captive breeding program.

The Recovery Plan established a Southwest San Diego Recovery Unit of critical habitat that included Proctor Valley (USFWS 2003, p. 81, Fig. 16). In 2009, the USFWS published a final rule updating the Recovery Plan and finalizing the critical habitat designation. (74 Fed. Reg. 28776 (June 17, 2009) ["2009 Update," included as Attachment 5.) The 2009 Update acknowledged that in 2003 the USFWS found that habitat in the vicinity of Otay Lakes and Rancho Jamul appeared to be "an area of key landscape connectivity for all subpopulations in southwest San Diego County." (*Id* at 28780.) The 2009 Update merged several "occurrence complexes" in the Otay Region identified in the Recovery Plan into a single, consolidated critical habitat area identified as the "Otay Mountain Core Occurrence Complex," or "Unit 8." (*Id.* at 28780 ["New Quino checkerspot butterfly observations (Service GIS database) between occurrence complexes identified in the Recovery Plan have resulted in merging of the Otay Valley (core), West Otay Mountain (core), Otay Lakes (core), Proctor Valley (non-core), Dulzura (non-core), and Honey Springs (non-core) occurrence complexes into a single, expanded Otay Mountain Core Occurrence Complex."], 28859 [Map of Unit 8].) The USFWS found that "[t]he physical and biological features found in Unit 8 may *require special management considerations or protection to minimize impacts from loss and fragmentation of habitat and landscape connectivity due to development*, maintenance and recreational activities, trash dumping, invasion by nonnative plants, fire, enhanced soil nitrogen, and climate change." (*Id.* at 28811 [emphasis added].)

RO-4-42

DEIR Figure 2.3-12 shows that the majority of the Project's development footprint encroaches on the designated Unit 8 critical habitat area, with 483 acres being directly destroyed as part of the Project footprint. (DEIR at 2.3-19, -76.) The County may not merely ignore the federal "core occurrence area" designation,[5] which is biologically and ecologically significant. (Quino Scientist Letter at 3-5.) By dismissing that Unit 8 is a "core occurrence area" within the Quino checkerspot butterfly's designated critical habitat, the EIR ignores substantial evidence in the record of a significant effect on a federally listed endangered species through impairment of Quino checkerspot butterfly recovery and other adverse effects associated with the destruction or adverse modification of designated critical habitat. Furthermore, the EIR misleads the public and decision-makers and fails as an informational document and a document of public accountability. It is also inexplicable and inexcusable that the FEIR completely omits any reference to the 2009 Recovery Plan Update, which was adopted by final rule and published in the Federal Register.

RO-4-43

The County has elsewhere acknowledged the high conservation value of the project site for Quino checkerspot. Attachment 6 supplies a "QCB Heat Map" prepared by the County in conjunction with the County's development of a proposed "Quino Amendment" to the South County Multispecies Habitat Conservation Plan and obtained by the Center. The County's map quantifies the "conservation value" of approximately 0.25 mile x 0.25 mile tiles on a range of 0.5 to 5.5, which are color-coded from blue (lowest conservation value) to red (highest conservation

RO-4-44

[5] See, e.g., DEIR 2.3-76 (referring to the 483 acres of Unit 8 critically designated and occupied habitat as only "potential habitat" for Quino), 2.3-19 (referring to the acreage as "suitable Quino checkerspot butterfly habitat").

value). The Center plotted the Project's development footprint over the "Heat Map," (see Attachment 7), which reveals that the development footprint lies almost exclusively atop habitat on the highest end of the range for "conservation value," as determined by the County itself.

Nowhere is this deficiency more apparent than when the EIR purports to analyze the Project's impacts under threshold of significance Criterion G (DEIR at 2.3-23), which asks whether

RO-4-45

> The Project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to Project boundaries, although smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

RO-4-46

Although the EIR admits that "the Project site is large enough to be considered a core wildlife area per the County Biology Guidelines" (id.), it provides a cursory analysis, claiming in a single paragraph that because "[a]pproximately 1,089 acres of potential wildlife habitat would be preserved on-site as natural open space, in part, for the benefit of wildlife species" which "are expected to be sufficient to support viable populations of common and sensitive wildlife species known to occur on the Project site" that "impacts to this core wildlife area are considered ***less than significant***." (Id. [emphasis in original].) The analysis makes no mention of the Quino checkerspot butterfly and provides no evidence whatsoever to support the conclusion that preserved open space within the Project Area is "sufficient to support viable populations of" this endangered species.

2. The EIR Fails to Disclose the Project's Impacts to Existing Critical Habitat from the Project's "Edge Effects."

RO-4-47

In addition to ignoring that the Project will disturb "core" critical habitat for the Quino checkerspot butterfly, the EIR fails to account for the indirect effects of the Project on critical habitat adjacent to the footprint, which will be significantly affected. These impacts from development on habitat adjacent to, but not within, the Project footprint are known as "edge effects" and result from dust, invasive plants and animals, noise, increased wildfire risk, lighting, and other byproducts of development.

RO-4-48

The Project's edge effects would affect the species thousands of feet away from the development sites, effectively creating a large zone of impact area that the EIR ignores. Not only does the EIR fail to account for this impact, but its proposed mitigation areas include open space within the development, and areas immediately adjacent to the development. The Project would also negatively affect these areas. (Quino Scientist Letter at 5-6.) Consequently, these proposed mitigation areas cannot be relied upon for mitigation, but instead should be viewed as additional, negatively affected habitat.

RO-4-49

In order to complete development before the host plants die off for the season, Quino checkerspot butterfly larvae that come out of diapause seek microclimates with high solar insolation. (Quino Scientist Letter at 4-5.) This means that during a period of critical survival for the Quino checkerspot butterfly, it must seek out host plants in sufficient quantity in areas with

little shade before the caterpillar is able to pupate. Further, when the caterpillar does enter diapause or pupates, it often does so in shaded cavities of bushes, such as California Buckwheat. (Pratt and Emmel 2010 at p. 110.) To get between these two types of microhabitats, as caterpillars, individuals must actively crawl around throughout the landscape to find suitable conditions. This activity puts them at risk to being crushed and killed by human trampling from direct or indirect (e.g. vehicles) contact, the incidence of which is greatly increased by the Project.

RO-4-50

In addition to direct loss of the butterfly and its habitat, indirect effects of the project include the introduction of invasive exotic plants that will be used for ornamental purposes in the homes, roadway medians, and other developed areas, and invasive exotic animals that will outcompete or feed on the Quino checkerspot butterfly. Many of the invasive plants will eventually disperse from the developed areas into the proposed preserve where they will outcompete the foodplants and nectar sources for the Quino checkerspot butterfly, or outright eliminate its habitat, including open areas used by the adults for feeding, mating, and other essential behaviors. The size and density of some exotic weeds, such as non-native grasses will prevent the adult female Quino checkerspot butterflies from successfully locating their foodplants upon which to lay their eggs. Invasive animals, such as non-native ants, European earwigs, slugs, and snails will feed on Quino checkerspot butterfly eggs, caterpillars, and pupae.

RO-4-51

Because it fails to acknowledge the indirect impacts to the Quino checkerspot butterfly from habitat degradation from edge effects, the EIR fails to mitigate these impacts or adopt measures that will be effective in reducing or avoiding them. The closest the EIR comes is merely requiring fencing and signage (M-BI-1f, DEIR at 7.0-5). But the EIR does not provide substantial evidence that these measures will protect the preserved areas from the edge effects described above.[6] Given the sensitivity of this endangered species to human impacts, the degradation of core population habitat from the Project's indirect effects will have a significant negative impact on this metapopulation.

3. The FEIR's Mitigation for the Project's Impacts to Quino Checkerspot Butterfly Is Inadequate.

RO-4-52

Quino checkerspot butterflies are especially susceptible to habitat loss, and contiguous habitat is essential to their survival. (Quino Scientist Letter at 5.) Over the longer term of the metapopulation-scale occupancy, the Quino checkerspot butterfly requires a sufficient number of habitat patches supporting core and satellite populations in which it can survive adverse environmental conditions. (Id.) Populations appear and disappear on habitat patches across the metapopulation landscape in response to the temporal and spatial changes in habitat quality caused by climatic conditions such as rainfall, drought, predators, parasites, disease and other factors. (*Id.* at 5-6.) By removing a large area of designated critical habitat harboring a core Quino checkerspot butterfly population, the Project would result in the species being less likely to persist during poor environmental conditions or able to build its numbers during good years,

[6] Although the project documents include a so-called "Preserve Edge Plan," that document does not include impose concrete, and enforceable, mitigation measures, and it is non-binding: the EIR's mitigation only provides that future plans "shall be evaluated for Project compliance" with the Preserve Edge Plan, not that all plans must *actually comply* with the Preserve Edge Plan before they are approved. (DEIR at 7.0-1.)

placing stress on the metapopulation. Breaking up the existing continuous expanse of habitat risks "turning this metapopulation into a house of cards, vulnerable to being blown down by the slightest adverse environmental factor." (Quino Scientist Letter at 4-5.)

RO-4-53

Despite a flawed analysis that understates impacts to the Quino checkerspot butterfly from the Project, the EIR acknowledges that impacts to the species and its habitat will be significant without mitigation. However, it wrongly concludes that the proposed mitigation will reduce these impacts to less-than-significant levels, because the mitigation measures do not comply with CEQA's requirements for mitigation and are inadequate to reduce the Project's impacts to the QCB to less than significant levels.

M-BI-9a (Quino Checkerspot Butterfly Take Authorization)

RO-4-54

Merely requiring the Project Applicant to obtain a take permit from the USFWS in the future—which is already independently required under the federal Endangered Species Act—does not ensure that impacts from the Project will be fully mitigated. Nor does this measure satisfy CEQA's requirements for deferred mitigation.

Furthermore, CEQA sets out a fundamental policy requiring local agencies to integrate the requirements of . . .[CEQA] with planning and environmental review procedures otherwise required by law or by local practice so that all those procedures, to the maximum feasible extent, run concurrently, rather than consecutively. (Public Resources Code § 21003(a).) The CEQA Guidelines similarly specify that "[t]o the extent possible, the EIR process should be combined with the existing planning, review, and project approval process used by each public agency." (Guidelines, § 15080.) To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements. (Guidelines, § 15124(d)(1)(C), *see also* Guidelines, § 15006(i).) The EIR does not justify why application for take permits from the federal agencies has been deferred until after CEQA review has been completed and the Board has approved the Project.

M-BI-9a (Quino Checkerspot Butterfly On-site Habitat Preservation)

RO-4-55

The bulk of the EIR's proposed mitigation is "preservation" of 966 acres on the Project site and "restoration" of an additional 6.3 acres. (DEIR at 7.0-12.) The proposed onsite mitigation is inadequate, proposing to place preserve acreage *right next to the Project* and degraded from edge effects. The EIR's proposal to mitigate the loss of an occupied core Quino checkerspot butterfly habitat at a 2:1 ratio with largely on-site habitat will not reduce the impacts from this Project to less than significant. (Quino Scientist Letter at 5-6.) Mere ratio-based mitigation simply will not compensate or offset the loss of the occupied core habitat at Otay Village 13. (Id.)

RO-4-56

Any mitigation should be based on the biology and ecology of the Quino checkerspot, and designed to ensure that the affected metapopulation will be able to survive the substantial reduction in core habitat resulting from the Project. The EIR's mitigation proposal of on-site preservation at a 2:1 ratio does not accomplish this. (Quino Scientist Letter at 5-6.) It appears to be based entirely on the proposed future "Quino Amendment" to the MSCP. (DEIR at 2.3-19, see also 2.3-52.) But the EIR does not provide a draft of the proposed Quino Amendment, nor

any other evidence supporting the use of 2:1 onsite preservation as adequate mitigation for the loss of core Quino checkerspot butterfly habitat. The proposed "mitigation" would essentially allow an area of core, designated critical habitat that is essential for the continued existence and recovery of the Quino checkerspot butterfly metapopulation to be reduced by one third, with the remaining two thirds negatively affected by the edge effects from the development footprint. (Quino Scientist Letter at 5-6.) There will be no addition to existing habitat and the on-site habitat will be seriously degraded as a result of edge effects, invasive species, fragmentation, increased wildfire risks, and human disturbance. (Id.) There is no evidence to suggest that this proposed mitigation will be sufficient to reduce the Project's impacts to less than significant.

M-BI-9b (Quino Checkerspot Butterfly Management/Enhancement Plan)

RO-4-57

The EIR fails to adopt concrete, specific performance measures to ensure that lands set aside for Quino checkerspot butterfly habitat will be managed appropriately. Instead, the EIR states that the Project Applicant will "prepare a long-term Quino Checkerspot Butterfly Management/Enhancement Plan" whose only requirement is that it will include a survey methodology "to monitor effects on Quino checkerspot butterfly population health." (DEIR at 7.0-12.)

RO-4-58

The County's approach is contrary to authoritative legal precedent from the Fourth District Court of Appeal. In *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 280-283 the Court held an EIR's similar "provision providing for the postapproval formulation of the habitat plan's provisions for active management of the Quino within the preserve violates CEQA's proscription against deferred mitigation measures." The Court so held despite the fact that the lead agency in that case had circulated a draft of the habitat plan and had specifically required that it be approved by the wildlife agencies before being implemented. Yet here the EIR's mitigation falls far shorter—it does not require the plan even to be prepared until "prior to the issuance of the first grading permit that impacts habitat identified as suitable for the Quino checkerspot butterfly," does not require input or approval by the wildlife agencies, and does not even call for active management. (DEIR at 7.0-12.) As in *Preserve Wild Santee*, the EIR "does not state, nor is it readily apparent, why specifying performance standards or providing guidelines for the active management of the Quino within the preserve was impractical or infeasible at the time the EIR was certified." (210 Cal.App.4th at 281.)

4. The EIR Fails to Adequately Analyze Cumulative Impacts to the Quino Checkerspot Butterfly.

RO-4-59

An EIR must examine the cumulative impacts of the project under consideration. CEQA defines "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." (CEQA Guidelines § 15355.) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project "when added to other closely related past, present, and reasonably foreseeable probable future projects." (CEQA Guidelines § 15355(b).) While an agency is not expected to foresee the unforeseeable, it is expected to use its "best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144; *see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 428.) The purpose of analyzing cumulative

environmental impacts is to assess adverse environmental change "as a whole greater than the sum of its parts." (*Environmental Protection Information Center v. Johnson* (1985) 170 Cal.App.3d 604, 625.) Absent meaningful cumulative analysis "piecemeal development would inevitably cause havoc in virtually every aspect of the [] environment." (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 721.)

RO-4-60

The FEIR fails in this analysis. Although the EIR lists several projects that would have impacts to Quino checkerspot butterfly (DEIR at 2.3-34 to -35), it merely recites vague statements about what mitigation might be required for those projects (*see id.* ["The mitigation required for the impacts to Quino checkerspot butterfly [from this project] has not yet been identified but will likely be required."]). Critically, the EIR fails to calculate the total cumulative permanent loss of Quino checkerspot butterfly habitat resulting from these projects, or evaluate the effect that this loss will have on the species. This omission is especially jarring, as the USFWS has identified cumulative land use decisions as the primary threat to the species: "loss and modification of Quino habitat continue to be a primary threat to the subspecies, especially in areas where urbanization is expected to expand [such as]Southeast San Diego County. . . ." (USFWS 5-year review 2009.) Unsurprisingly, EIR fails entirely to mention the 2009 Update to the Recovery Plan, or the fact that Unit 8 in Proctor Valley is a "core occurrence complex" when analyzing the Project's cumulative impacts to the Quino checkerspot butterfly.

B. The Project's Analysis of and Mitigation for the Project's Impacts to Vernal Pools and Vernal Pool Species Is Inadequate.

RO-4-61

As we explained in our May 22, 2015 letter (Attachment 1), the Project will have a significant impact on vernal pools and vernal pool species present on the Project site. Most alarming is the planned destruction of the entire K6 vernal pool complex and associated watershed, which will be covered by the Project footprint. (See DEIR Fig. 2.3-7.) The EIR acknowledges that the federally endangered San Diego fairy shrimp is present in this complex. (DEIR at 2.3-59.)

RO-4-62

The EIR proposes to mitigate the destruction of the K6 vernal pool complex by allowing the Project Applicant to elect either to (1) conduct "restoration" activities on and around the K8 vernal pool complex, or (2) purchase "vernal pool mitigation bank credits." (DEIR 2.3-44.) Yet the EIR provides no evidence to support the notion that restoration activities can be effective in creating, enhancing, improving, or protecting vernal pool habitat. And the mitigation banking fee option is so vague as to be nearly meaningless. CEQA allows for mitigation fees only where there is evidence of a functioning, enforceable, and effective implementation program—a standard that is clearly not met here. (See *Anderson First Coalition*, 130 Cal.App.4th at 1189, *Woodland*, 225 Cal.App.4th at 198, *Gray*, 167 Cal.App.4th at 1122.)

RO-4-63

Because the proposed mitigation will not reduce the Project's impacts to vernal pools and vernal pool species, including the San Diego fairy shrimp, the Project should, at a minimum, be reconfigured so that the footprint does not cause the destruction of the K6 vernal pool complex or take of the San Diego fairy shrimp.

C. The Project's Analysis of and Mitigation for the Project's Impacts to Golden Eagles Is Inadequate.

RO-4-64

The Project site is the location of foraging area for Golden Eagles, and the EIR acknowledges that it would affect 620 acres of foraging habitat. (DEIR at 2.3-22.) The DEIR incorrectly concludes that this impact would be less than significant because "other" suitable foraging habitat would be preserved on site. (Id.) This unsupported conclusion does not constitute substantial evidence that this impact will be less than significant. The EIR does not consider or address how edge effects and other impacts from Project development will affect the suitability of the "preserved" land for foraging. Furthermore, a "mitigated" net loss of 620 acres represents a substantial loss of foraging habitat and the EIR cannot merely conclude, without any analysis, that this loss is not significant. This is especially true given that the EIR fails to evaluate the cumulative impacts of the loss of foraging habitat to Golden Eagles from other projects in the region.

III. The EIR's Fire Risk and Fire Safety Analyses Are Inadequate.

RO-4-65

The proposed Project would place 1,938 dwellings (1,881 single-family homes and 57 attached homes in the multiple use area; DEIR at 1.0-10) for over 5,500 people (based on U.S. census data of 2.87 persons per household in the San Diego County) in areas identified as very high fire hazard severity zones by the California Department of Forestry and Fire Protection (Cal Fire). Placing more than 5,500 potential residents in highly fire-prone natural areas without fully disclosing and analyzing the severe environmental, health, and social consequences or requiring appropriate, science-based analyses regarding wildfire risk is reckless; it also violates CEQA by impeding the ability of the public and decision-makers to evaluate the significant adverse impacts the Project would have on the environment. (CEQA Guidelines § 15125(a); *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.App.4th 310, 315].) To comply with CEQA, the County must provide adequate information and analyses on existing conditions and the proposed avoidance, minimization, and mitigation measures so that the public and decision-makers are able to effectively evaluate the Project and whether its adverse impacts will truly be minimized.

RO-4-66

On November 13, 2018, the Center sent a letter to the San Diego County Board of Supervisors discussing the wildfire impacts of poorly planned development in San Diego County (the "November 13 Letter"). A copy of the November 13 Letter is included here as Attachment 8 and is incorporated by reference. The issues raised in the November 13 Letter apply directly to this Project—(1) developments in fire-prone natural areas that have historically burned have the highest chances of burning; (2) development in fire-prone areas will lead to more frequent, human-caused fires in Southern California; (3) public safety in developments like Otay Village 13 cannot be guaranteed; (4) developments like Otay Village 13 contain insufficient fire safety measures and fire protection plans; (5) increased human ignitions will increase unnatural levels of smoke; (6) the direct economic impacts of wildfires are worsening; (7) the devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that will burn are too great, such that there is no justification for approving this development. After the deadly and destructive fires of 2018, former Director of the California Department of Forestry and Fire Protection Ken Pimlott advocated banning home construction in

high fire-prone areas to improve fire safety for homeowners, firefighters, and communities (Thompson 2018). And Governor Newsom's Strike Force reiterated this message, recommending that homes be built away from wild, fire-prone areas (Governor Newsom's Strike Force 2019).

RO-4-67

The proposed Project would increase wildfire risks that could cause residents to lose their homes and the lives of loved ones and first responders. The increased fire risk could also worsen public health, destroy native ecosystems, and reduce biodiversity. The DEIR fails to adequately disclose, assess, or mitigate these potential impacts. The DEIR's conclusion that "the Project would have **a *less than significant impact*** due to wildfires" (DEIR at 2.6-24) is not supported by substantial evidence.

A. The EIR Fails to Adequately Assess Wildfire Risk and the Potential Impacts of More Fire Ignitions from Placing Homes and People in High Fire-Prone Areas.

RO-4-68

According to a new report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force 2019). In a new scientific study, Syphard et al. (2019) found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss. This is not new information; scientists have been reporting it for many years in scientific, peer-reviewed journals, and firefighters have observed it. Yet the EIR fails to adequately assess the Project's impacts on wildfire risk by neglecting to use the best available science.

RO-4-69

Between 2000 and 2011, nearly 1,000 homes were destroyed annually by wildfires in Southern California (Syphard et al. 2012), and that number is likely rising given the record-breaking fires in the wildland urban interface in the last few years and the continued construction of new homes in natural fire-prone areas. Sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Keeley and Syphard 2018; Radeloff et al. 2018; Syphard et al. 2019). Human-caused fires account for 95-97% of all fires in Southern California's Mediterranean habitats (Syphard et al. 2007; Balch et al. 2017). In San Diego County, Keeley and Syphard (2018) found that human ignitions were responsible for 97% of fires. The most numerous and largest fires in San Diego County have been caused by equipment and powerlines in the wildland-urban interface, where housing density is low to intermediate (Syphard and Keeley 2015). Leapfrog developments like Otay Village 13 have the highest predicted fire risk in the County (Syphard et al. 2013). In addition, multiple studies indicate that developments with low/intermediate-density clusters surrounded by fire-dependent vegetation (*i.e.,* grasslands, chaparral, scrub) in areas with a history of fires – like the proposed Project – have the highest chances of burning (Syphard et al. 2012; Bistinas et al. 2013; Syphard et al. 2013; Syphard et al. 2019). Yet, the DEIR simply ignores this ample scientific evidence linking sprawl development in high fire-prone wildlands

with increased fire risk, though the Project will place homes exposed to maximum fire susceptibility in areas where fires will inevitably burn.

RO-4-70

The EIR fails to disclose that it is located in areas designated by CalFire as having high and very high fire hazard severity zones, and that an analysis conducted by USA Today-California Network ranked the Project area to be in the worst 1% in the state when it comes to population-to-evacuation-route ratios (zip code 91935, Jamul and surrounding areas in San Diego County) (Wyloge 2019). This suggests that when a fire occurs in the area, a high ratio of residents to escape routes could prevent residents and resort visitors and employees from being able to safely evacuate, which is what happened in Paradise, California during last year's Camp Fire. In addition, the EIR states that "[m]uch of the property has burned four times over approximately 125 years" (DEIR at 2.6-7), leaving out the true number of fires that have been recorded in the Project area. The Fire Protection Plan ("FPP") does slightly better, stating that "five fires…have burned on the property" (FPP at 9). However, according to fire perimeter data from CalFire[7], there have been at least 12 fires within some portion of the Project area since 1910, of which 10 occurred in the last 51 years. While the EIR and FPP acknowledge that the 2003 Mine/Otay Fire burned the entire Project area, they failed to mention that the 2007 Harris Fire burned through the majority of the Project area as well. This is a failure to adequately describe existing wildfire conditions in the Project area. Areas that have burned in the past will likely burn again. Despite the history of fires in and adjacent to the Project site, the EIR fails to adequately describe and analyze the potential impacts of fire and fire risk due to the Project.

RO-4-71

The EIR also fails to acknowledge the potential wildfire hazard from increased human-caused ignitions in the Project area. By placing people in fire-prone areas, the development would increase the number of potential ignition sources, and therefore the risk of wildfires occurring. In particular, the EIR fails to mention the increase of electrical equipment in the Project area due to the Project. Electrical equipment is a significant source of human-caused ignitions (Keeley and Syphard 2018), and the 2017 Tubbs Fire, which killed 22 people and destroyed more than 5,600 structures, was recently found to have been caused by failed electrical equipment on private property (McGough et al. 2019). Placing homes and people in high fire-prone areas would only increase the potential likelihood of these ignition sources, as has been documented in multiple scientific studies (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Keeley and Syphard 2018; Radeloff et al. 2018; Syphard et al. 2019). Thus, the DEIR fails to adequately assess wildfire risk in the Project area.

B. The DEIR's Mitigation for Wildfire Impacts Is Inadequate and Improperly Deferred.

RO-4-72

The EIR claims to mitigate wildland fire impacts to less than significant because the Project complies with fire codes and is consistent with the FPP (DEIR at 2.6-24). However, the EIR's threadbare mitigation for human ignitions—most of which is already required by law—is insufficient to mitigate the increased risk of human ignitions due to the Project and the increased strain on firefighting resources that would accompany the Project. While some measures may

[7] CalFire data can be downloaded at: https://frap.fire.ca.gov/data/frapgisdata-sw-fireperimeters_download

help make homes *fire-resistant*, even the best mitigation cannot make a development *fire-proof*. In addition, homes can add fuel to fires, and fire safety is not guaranteed.

RO-4-73

Public safety threats are often exacerbated by infrastructure unable to accommodate the consequences of more human-caused fires at the wildland urban interface. Thus, it is imperative that adequate safety plans are in place prior to an emergency. Yet the EIR does not provide a community protection and evacuation plan ("CPEP"), stating only that a "Community Protection and Evacuation Plan (CPEP) will be prepared for the Otay Ranch Resort Village Community prior to occupancy" (FPP at 43). This amounts to improperly deferred mitigation. Mitigation measures for the Project must be considered in the EIR so that the proper environmental analysis can take place. (See *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296.) Therefore, finalized safety plans (that provide for adaptive strategies/updates), such as a CPEP, need to be included in the EIR to enable the public and decisionmakers to evaluate the effectiveness of the plans in avoiding, minimizing, and mitigating wildfire impacts from the proposed Project. More analyses are needed to determine appropriate mitigation measures to effectively minimize wildfire risk in natural areas where fires have historically occurred and will inevitably occur again.

RO-4-74

Even if the CPEP were provided, in natural areas with high fire threat where fires have historically burned, a public safety or evacuation plan may not be enough to safeguard people and homes from fires. Having warning systems and evacuation routes in place is important for fire preparedness and fire safety, but these are not guaranteed to function when a fire occurs. Wildfires may ignite with little or no notice, and in severe weather conditions, wind-driven fires can spread quickly—they can cover 10,000 hectares in one to two days as embers are blown ahead of the fires and towards adjacent fuels (e.g., flammable vegetation, structures) (Syphard et al. 2011; Nauslar et al. 2018). This was seen with the recent Camp Fire in Butte County, which spread at a rate of 80 hectares a minute (that is about one football field per second) at its fastest, and in its first 14 hours it burned through over 8,000 hectares (Sabalow et al. 2018). In these types of emergencies warning systems can be slow and ineffective at reaching all residents and resort visitors and employees in harm's way, and planned evacuation routes may not be sufficient. These issues were observed during the Camp Fire, which led to at least 85 deaths and 13,000 burned homes (Sabalow et al. 2018), as well as in 2017's Tubbs Fire in Sonoma County and Thomas Fire in Santa Barbara and Ventura Counties, which led to more than 40 deaths and almost $12 billion in property damage (Lundstrom et al. 2017; St. John 2017). The EIR fails to adequately assess the danger of fast-moving wildfires and mitigate the resulting impacts.

RO-4-75

A CPEP should also include evacuation routes, but again, in the chaos of wildfires, designated evacuation routes may not be enough. The combination of smoke obscuring roads and signage, trees collapsing or being flung into roadways by the wind, and the emotional state of those fleeing for their lives can lead to deadly collisions and roadblocks. And survivors are left to cope with the death of loved ones, physical injuries, and emotional trauma from the chaos that wildfires have inflicted on their communities. These issues are heartbreakingly depicted in an article published in the Sacramento Bee on Oct 22, 2017 (Lundstrom et al. 2017). Furthermore, as mentioned previously, the Project area is located in the worst 1% in the state when it comes to population-to-evacuation-route ratios (zip code 91935, Jamul and surrounding areas in San

Diego County) (Wyloge 2019), which increases the chances of residents and resort visitors and employees getting trapped in the area when fires occur.

RO-4-76

Another critical component of protecting lives and property from wildfires is fire hazard and fire safety education for homeowners in or near fire hazard areas. Structures with fire-resistant features, such as ember-resistant vents, fire-resistant roofs, and surrounding defensible space, have been shown to reduce the risk of destruction due to wildfires (Quarles et al. 2010; Syphard et al. 2014). Although the EIR states that "residents and occupants of commercial and resort facilities will be provided ongoing education regarding wildfire" and the "educational information will support the fire safety and relocation features/plans designed for this community" (FPP at 43), this language is vague and there appears to be no mandatory requirement to inform property owners about the proper maintenance and upkeep of the structures themselves, nor is there an enforcement mechanism in place to ensure property owners are compliant with the fire safety guidelines. There is also no education or outreach regarding how to minimize human ignitions, despite humans being the main cause of almost all fires in San Diego County (Keeley and Syphard 2018). In addition, external sprinklers with an independent water source would reduce flammability of structures (California Chaparral Institute 2018). Although external sprinklers are not required by law, waterlogged structures would be much less likely to burn compared to dry structures, yet the proposed Project does not include this feature. Thus, the EIR fails to consider additional feasible mitigation for the Project's wildfire impacts.

C. The DEIR Fails to Adequately Assess and Mitigate the Impacts to Special-status Species Due to Increased Human-caused Ignitions.

RO-4-77

As mentioned previously, sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, and these types of developments have the highest chances of burning (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Syphard et al. 2013; Balch et al. 2017; Keeley and Syphard 2018; Radeloff et al. 2018; Syphard et al. 2019). This could disrupt the natural fire regime and lead to a dangerous feedback loop of deadly fires and habitat destruction.

RO-4-78

The Project area is dominated by chaparral and sage scrub, native California habitats that are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes (Keeley and Fotheringham 2001). However, if these regimes are disrupted, the habitats become degraded (Keeley 2005; Keeley 2006; Syphard et al. 2018). When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005; Keeley 2006; Syphard et al. 2009; Safford and Van de Water 2014; Syphard et al. 2018). This could have serious consequences for special-status species in the Project area that rely on these habitats for survival, such as the federally endangered Quino checkerspot butterfly (*Euphrdryas editha quino*) and the federally threatened coastal California gnatcatcher (*Polioptila californica californica*). In addition, large-scale landscape changes due to vegetation-type conversion from shifts in natural fire regimes could impact wide-ranging species like mountain lions (Jennings 2018), whose populations are already struggling in the area due to lack of connectivity and genetic isolation (Gustafson et al. 2018;

Dellinger 2019). There is no mention of this in the EIR. Thus, the EIR fails to adequately disclose, assess, and mitigate potential wildfire impacts of the Project on special-status species.

D. The DEIR Fails to Adequately Account for the Effects of Climate Change on Wildfire Risk.

RO-4-79

In addition to the construction of more homes in the wildland-urban interface, climate change has been identified as another main factor that "magnif[ies] the wildfire threat and ›lace[s] substantially more people and property at risk than ever before" (Governor Newsom's ›trike Force 2019). Climate change is creating hotter and drier conditions that make natural areas more vulnerable to human-caused ignitions; therefore, the increased human activity that would accompany the proposed Project in fire-prone natural areas would further exacerbate wildfire risk. Yet there is no discussion of climate change and wildland fires in the EIR or the FPP. The EIR fails to adequately consider the effects of climate change combined with ongoing leapfrog development in fire-prone areas in the County when evaluating the Project's wildfire impacts.

E. The EIR Fails to Adequately Assess and Mitigate the Potential Health and Air Quality Impacts from Increased Smoke from Human-caused Ignitions.

RO-4-80

Human-caused wildfires at the urban wildland interface that burn through developments, as is becoming more common with housing extending into fire-prone habitats, increase the ˆrequency and toxicity of smoke exposure to communities in and downwind of the fires (*e.g.*, Chula Vista, 2010 Census population of 243,916). This can lead to harmful public health impacts lue to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold 2011).

RO-4-81

Increased fire frequency due to human activity and ill-placed developments lead to increased occurrences of poor outdoor and indoor air quality from smoke (*e.g.*, Phuleria et al. 2005), which can have public health effects. Hospital visits for respiratory symptoms (*e.g.*, ›sthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and ardiovascular systems have been shown to increase during and/or after fire events (Künzli et al. 2006; Viswanathan et al. 2006; Delfino et al. 2009; Rappold et al. 2012; Liu et al. 2015; Reid et al. 2016). Several of these studies are specific to the 2003 Southern California fires, which burned through almost 750,000 acres and approximately 5,000 structures (Künzli et al. 2006; Viswanathan et al. 2006; Delfino et al. 2009). Children, elderly, and those with underlying chronic disease are the most vulnerable to the harmful health effects of increases in wildfire smoke. The EIR fails to adequately assess and mitigate the proposed Project's potential impacts of increased smoke exposure due to increased human-caused ignitions.

F. The EIR Fails to Adequately Assess and Mitigate the Impact of Increased Wildfires on Fire Protection Services and Utilities.

RO-4-82

The EIR fails to consider the impacts on firefighters and first responders of developing the Project in a high fire-prone natural area subject to intermittent wildfires. Adding almost 2,000 acres of development to these wild areas will necessitate significant firefighting costs from both

state and local authorities. Cal Fire is primarily responsible for addressing wildfires when they occur, and its costs have continued to increase as wildfires in the wildland urban interface have grown more destructive. During the 2017-2018 fiscal year, Cal Fire's fire suppression costs were a record $773 million (Cal Fire 2018). The vast majority of wildfires in Southern California are caused by humans (Balch et al. 2017; Keeley and Syphard 2018), and siting this development in a high fire hazard area will increase the frequency and likelihood of such fires (Syphard et al. 2012; Syphard et al. 2013; Radeloff et al. 2018; Syphard et al. 2019). The EIR fails to consider how the Project will impact utilities and state finances or draw limited fire-fighting resources from other areas. The Board should not be approving development that will burden future generations of California with the costs of defending even more cities from dangerous blazes.

RO-4-83

According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency calls to fire departments have tripled since the 1980s (Gutierrez and Cassidy 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and they are being kept away from their homes and families for more and more days out of the year (Bransford et al. 2018; Del Real and Kang 2018; Gutierrez 2018; Simon 2018; Ashton et al. 2018). In addition, the firefighting force often must rely on volunteers to battle fires year-round.

RO-4-84

The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Del Real and Kang 2018; Simon 2018; Ashton et al. 2018). The physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al. 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al. 2018). There have also been reports that suicide rates and substance abuse have been increasing among firefighters (Simon 2018; Greene 2018). This is not sustainable.

RO-4-85

The EIR fails to adequately assess and mitigate the impacts to fire protection services. Placing an additional development with almost 2,000 homes in fire-prone areas will further burden already strained people and resources. The EIR states that the Project will provide a temporary onsite facility for fire service during the early phases of construction, "until such time as a permanent fire station can be funded and constructed on-site" (FPP at 41). This suggests that a permanent fire station may never be built, if funding is not secured. This amounts to improperly deferred mitigation. Mitigation measures for the Project must be considered in the EIR. (See *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296.) Therefore, finalized mitigation plans as significant as the construction of a permanent fire station to serve the area need to be included in the EIR to enable the public and decisionmakers to evaluate the effectiveness of the plans in avoiding, minimizing, and mitigating wildfire impacts from the proposed Project.

Even if a permanent fire station is built and equipped, it is unclear if human and monetary capital will be sufficient to operate and maintain the new fire station. The personnel cost over the life of the Project (essentially forever) will likely be hundreds of millions of dollars. Although the FPP states that "the Resort Village may contribute its fair share of the cost to construct and equip the facility" and "if the cost of providing fire services on-site exceeds available revenue, the Resort Village may contribute its fair share of maintenance and ongoing operation costs of the station" (FPP at 42), it is unclear whose revenue they are referring to and what "its fair share" would be or how that would be determined. Funding is already lacking for the increasing costs of fire suppression and property damage from wildfires in California; costs were over $30 billion from 2010 to 2017, and the destruction from 2018's Camp Fire and Woolsey Fire will likely cost additional billions of dollars. And the Developer is not required to reimburse Cal Fire for the many millions (or billions) of dollars Cal Fire will likely expense when—not if—Otay Village 13 needs to be defended from natural or human-caused wildfires in the vicinity and the Developer's "fair share" does not cover the bill.

RO-4-86

If costs are not sufficiently covered by the Developer, California and federal residents end up paying in the form of fire insurance premiums and taxes that support Cal Fire and federal government subsidies and grants for homes in high risk areas. And these costs do not include other indirect/hidden costs associated with wildfires, such as the costs of doctors' appointments, medication, sick days taken from places of work, funerals, etc. As the costs of housing in California continues to increase, these costs will also continue to rise. Given the current lack of funding and shortage of firefighting personnel, merely constructing a fire station without ensuring 100% support to sustain adequate firefighting operations is insufficient to mitigate the potential impacts on fire protection services due to the proposed Project.

G. The EIR Fails to Adequately Assess and Mitigate Cumulative Wildfire Impacts.

RO-4-87

The EIR fails to adequately assess the cumulative wildfire impacts of the Project. The San Diego Board of Supervisors recently approved four large developments that, together, would build 6,000 homes in high fire-prone areas in the County and put over 17,000 people at increased fire risk (based on Census Bureau estimates of 2.87 persons per household in the County, see Attachment 8 at 2). These developments, which were not included in the EIR or any analyses, include Harmony Grove South, Newland Sierra, Otay 250 Sunroad, and Valiano, which were approved in late 2018. The proposed Project would add almost 2,000 homes and more than 5,500 people to high fire-prone areas, ramping up both the probability of increased fire ignitions and increased fire threat to the region. With no actual analyses or presentation of scientific studies, the EIR states that "the proposed Project would ***not result in a cumulatively significant impact*** related to the risk of wildland fires" (DEIR at 2.6-27) due to compliance with building fire codes, implementation of an insufficient FPP and CPEP, and the construction of a fire station with no funding to maintain or operate it. The EIR fails to adequately assess, mitigate, or even acknowledge the severity of cumulative wildfire impacts due to the Project in and near the Project area.

IV. The EIR's Analysis of the Project's Water Supply Impacts Is Inadequate.

RO-4-88

The EIR fails to adequately assess the water supply impacts associated with the Project. The County's inadequate analysis signals an alarming disregard for the growing water supply challenges facing California and the arid Western United States. In addition to the faulty analysis, the Project itself is an example of the shortsighted land use planning that has for too long been the status quo in San Diego County. In light of the pressures that drought and over-allocation exert on water resources, it is critical, for example, that the County not approve a project that would feature residences expected to use far more water than the State average. (See DEIR Appendix C-17 at 2-2.)

A. The DEIR's Water Supply Analysis Relies on Outdated Planning Documents.

RO-4-89

The EIR's analysis of Project water supply and demand relies on third-party planning documents that are now outdated, requiring revisions to the EIR to reflect current regional water supply and demand conditions. If the County intends to move forward with Alternative H, relying on the updated water supply documents released in 2019 (Appendices D17 & D18), the project description must be revised and recirculated. As currently presented, it is unclear to the public and decision-makers which iteration of the Project is being considered, and what the potential impacts of that plan will be on regional water supplies.

1. The EIR Improperly Relies on Outdated Urban Water Management Plans.

RO-4-90

The EIR, and the Water Supply Assessment and Verification ("2014 WSAV") prepared in 2014 by the Otay Water District ("OWD"), rely on 2010 Urban Water Management Plans ("UWMP") prepared by the San Diego County Water Authority ("SDCWA"), Metropolitan Water District ("MWD") and OWD, respectively. (EIR Appendix C-17 at 3-2.) UWMPs play a critical role in land use planning, aiding decision-makers in determining whether there is sufficient supply to meet the future demand associated with proposed development. (Cal. Water Code §§ 10620-31.) UWMPs must be updated every 5 years in order to accurately demonstrate regional supply and demand dynamics in light of changing populations and land use needs. (Id. § 10631.) Pursuant to these requirements, MWD, SDCWA and OWD have each released a 2015 UWMP, and the DEIR must be revised to reflect the current information these documents contain.

2. Water Duty Factors Used to Analyze the Proposed Project Differ from Those Used to Analyze Alternative H.

RO-4-91

The EIR fails to clearly present Project water demand by using water duty factors that have since been updated, as demonstrated in the demand projections made for Alternative H. The Project water demand calculations are based on water duty factors set forth by OWD (DEIR Appendix C-17 at 2-2) that have since been updated, as reflected in the water service overview for Alternative H (Alternative H Appendix D-17 at 2-1). The EIR's water demand projects must be revised to reflect current water duty factors.

B. The EIR's Analysis of Regional Water Supply is Inadequate.

San Diego County's population is expected to increase over the next decades, (DEIR at 3.5-3), while climate modeling predicts decreasing replenishment of surface water supplies from rain and snow. (Barnett, 2008.) Under these projected future conditions, it is more vital than ever that land use planning be informed by accurate regional water supply projections. CEQA requires lead agencies to analyze the "pros and cons" of supplying water to a given land use based on substantial evidence; this standard is not met when an EIR "simply ignores or assumes a solution to the problem" of providing adequate water supply. (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 431 ["*Vineyard*"].) The EIR's water supply analysis is unsupported by substantial evidence and fails as an informational document because it contains internal inconsistencies, provides incomplete analysis of projected water supplies, and fails to provide an adequate explanation for how water supply shortages will be remedied.

RO-4-92

1. The EIR's Water Supply Projections are Inconsistent with SDCWA Projections.

The 2018 WSAV, prepared by OWD to support consideration of Alternative H, acknowledges that the Project's potable water demands will be supplied entirely with SDCWA water. (DEIR Appendix D-18 at 20.) The EIR explains that SDCWA has historically depended heavily on imported supplies from MWD. (DEIR Appendix D-17 at 3-4.) The EIR projects SDCWA's total available supplies, highlighting that MWD imports increase with each 5-year interval on the 20-year planning horizon. (DEIR Appendix D-17 at 3-5.) The MWD imports that SDCWA will receive, according to the EIR (Appendix D-17 at 3-5), vary greatly from the projected MWD imports SDCWA published on its website. (Attachment 9.) The SDCWA's chart shows significant reductions in the water supplies it expects to import from MWD (projecting 59,000 AF in 2020, reduced to 10,000 AF in 2035). In contrast, the EIR's table 3-1 laims that under normal water year conditions SDCWA expects to import 136,002 AF from MWD in 2020 and 224,863 AF in 2035. (Attachment 9; DEIR Appendix D-17 at 3-5.) SDCWA's projections clearly indicate that the SDCWA intends to drastically reduce its reliance on imports from MWD. Despite this, the EIR's analysis relies on the assumption that SDCWA will import no less than 224,863 AF from MWD in 2035 under all water year types analyzed. (DEIR Appendix D-17 at 3-5-7.) The vast discrepancy between SDCWA's publicly available data and the data relied on for the Project's water supply analysis is not explained in the EIR and calls into question the validity of the analysis in the EIR and associated water supply technical documents.

RO-4-93

2. The EIR Fails to Properly Acknowledge or Assess the Uncertainty of Future Water Supplies.

The EIR anticipates Project demand outstripping supply as soon as 2025 under single dry water year conditions. (DEIR Appendix D-17 at 3-7.) The EIR states these shortages will be "met from carryover storage and management actions." (DEIR Appendix D-17 at 3-7.) But the EIR provides no further detail about SDCWA's carryover storage programs, nor does it describe what actions SDCWA will have to take to alleviate significant supply shortages; accordingly, the EIR does not examine the potential environmental impacts associated with these actions.

RO-4-94

The County's conclusion that use of carryover storage will reduce or eliminate the impacts associated with water supply shortages is not supported by substantial evidence. The EIR states that SDCWA "only imports the amount of water necessary to meet demand." (DEIR Appendix D-17 at 3-6.) If the supply shortages will be met using SDCWA carryover storage, the EIR must explain how SDCWA can expect to have surplus supply to utilize the carryover storage capacity. The normal year projections in the EIR contain relatively fixed local supplies and set transfer amounts from Imperial Irrigation District and canal lining projects; the only variable amount is that which is imported from MWD. (DEIR Appendix D-17 at 3-5-7.) The EIR does not disclose to decision-makers and the public how the storage supply will be built up in anticipation of future water supply shortages if SDCWA only imports enough from MWD to meet demand. The EIR's water supply analysis must explain how (and from what sources) SDCWA will develop and maintain carryover capacity sufficient to alleviate water supply shortages.

RO-4-95

Nor can this information be found in supporting documents. The SDCWA 2015 UWMP devotes approximately 3 out of its more than 400 pages to the carryover storage program. (SDCWA UWMP at 11-3.) The brief section mentions the storage capacity that can be used to supply carryover needs, notably the San Vicente Dam (100,000 AF) and the Semitropic and Semitropic-Rosamund Water Banks (70,000 AF total). (SDCWA UWMP at 11-14.) But crucially, the UWMP does not disclose the sources of water that will supply the carryover storage program.[8] The County must provide information about the efficacy, supply sources, and likelihood of creating and maintaining carryover storage; it cannot merely conclude, without further explanation, that shortages will be met with carryover storage. (*See Vineyard*, 40 Cal.4th at 430 [CEQA requires an acknowledgment of potential supply uncertainties, and an analysis of the environmental effects of foreseeable alternative sources of water supply that address that uncertainty].)

RO-4-96

3. The EIR Does Not Explain the Relationship Between Emergency Supply and Carryover Storage.

The EIR's analysis of water supply shortages is further muddled when considering the interaction of carryover storage and the Emergency Storage Project. The SDCWA UWMP describes the Emergency Storage Project as a series of storage and conveyance facilities designed to deliver water during emergency situations in which the County is unable to receive MWD supply deliveries. (SDCWA UWMP at 11-2.) These facilities include a number of reservoirs, which provide a total storage capacity of 90,100 AF. (SDCWA UWMP at 11-2.) For example, the San Vicente reservoir lends 52,100 AF of storage to the Emergency Storage Project total. (SDCWA UWMP at 11-3.) As with its discussion surrounding the carryover storage, the EIR and water supply analysis for the project do not explain how the reservoir levels are maintained, or are affected in drought scenarios. The SDCWA lists the San Vicente reservoir as 80.6% full as of May 21, 2019, containing 200,931.1 AF of a total 249,358 AF capacity. (Attachment 10.) Even following above-average rainfall in 2016, 2017, and 2019 to-date, the

RO-4-97

[8] The closest it comes is stating that in 2008 SDCWA acquired 16,117 AF which it continues to store in an out-of-region banking program. (SDCWA UWMP at 11-14.)

reservoir is not full, and not in a position to provide the potential capacity cited in both the Emergency Storage Project and carryover storage programs. The Project would add to growing regional demand that will exacerbate the projected supply shortages. The EIR's water supply analysis must assess uncertainty in future supply, and analyze the impacts of potential alternatives or contingencies. (*Vineyard*, 40 Cal.4th at 430.)

4. The EIR Fails to Address the Regional Supply Ramifications of the Lower Basin Drought Contingency Plan.

The EIR should be revised to address the recently-approved Lower Basin Drought Contingency Plan ("LBDCP"), a compact among purveyors of Colorado River water in Arizona, Nevada and California, and how MWD's participation therein will impact regional water supplies. (MWD 2019e.) In the event of drought conditions that result in the water level of Lake Mead dropping below specified elevations, California holders of Colorado River water rights will be responsible for curtailing how much water they receive during the 9-year duration of the LBDCP. (MWD 2019a at 1.) If the elevation of Lake Mead drops below 1,035 feet, California will be responsible for contributing 350,000 AF of water annually. (MWD 2019b at 5.) MWD will be responsible for 85% of this contribution, up to 297,500 AF annually, since Coachella Valley Water District ("CVWD") is responsible for 7% of California's LBDCP contribution (MWD 2019c at 2), and Palo Verde Irrigation District ("PVID") is responsible for 8% of California's contribution under the LBDCP (MWD 2019d at 1). The MWD member agencies voted to approve the LBDCP on 3/12/2019 (MWD 2019f at 6); including authorization to allow MWD to cover the California contributions should other entities decide not to participate in the LBDCP (MWD 2019a at 1). Authorization to participate in the LBDCP on behalf of California will result in MWD assuming responsibility for the contribution originally to be made by Imperial Irrigation District ("IID"), which conditioned its approval of the LBDCP on events that MWD viewed as unlikely to occur. (Id. at 1.) Following MWD's agreement to contribute the 250,000 AF of water that IID would have been responsible for, IID has filed suit against MWD and the other signatories of the LBDCP alleging that participation in the LBDCP requires analysis under CEQA. (Verified Petition for Writ of Mandate, filed April 16, 2019) [the "Petition"].) The Petition highlights the potential impacts to regional water supplies if MWD must forego deliveries of up to 2,082,500 AF of Colorado River water over the duration of the LBDCP. (Id. at 10.) IID argues that MWD wrongly determined that approving the agreement is exempt from CEQA review, claiming there are potentially significant impacts associated with replacing the water that must remain in Lake Mead. (Id. at 11.)

RO-4-98

The EIR must provide analysis of how MWD will continue to provide imports to SDCWA, particularly in dry years when its obligations under the LBDCP would foreseeably be triggered. The EIR projects SDCWA receiving approximately 39% (over 260,000 AF) of its single-dry water year supply from MWD in 2020 and 2025. (DEIR Appendix D-17 at 3-7.) SDCWA is aware of the LBDCP, and acknowledges that SDCWA "is in a unique position to contribute substantially to raise Lake Mead elevation with its Intentionally Created Surplus (ICS)-qualified water, paid for solely by Water Authority ratepayers." (SDCWA 2019.) However, neither the EIR, nor any of the water supply planning documents referenced by the EIR—such as the SDCWA 2015 UWMP, or the MWD 2015 UWMP—mention the LBDCP. The verification of a water supply for a given project must be supported by substantial evidence; this

RO-4-99

evidence can include a recently approved UWMP. (Cal. Gov't Code § 66473.7(c)(1).) The lack of analysis of the regional impacts the LBDCP on MWD's ability to deliver water to SDCWA and other customers undermines the validity of water supply assessments that rely of MWD imports. This significant decrease in available MWD supply should be addressed, and potential replacement supplies should be designated, and the associated impacts should be disclosed and analyzed.

C. The EIR's Cumulative Impact Analysis for Water Supply is Inadequate.

RO-4-100

The DEIR does not adequately address the Project's cumulative impacts on regional water supply. San Diego County's practice of approving projects by General Plan amendment ("GPA") results in UWMPs—like those upon which the Project's WSAV is based—that perpetually under-report regional demand. The UWMPs base their supply and demand projections on the SANDAG Series 13 regional growth projections. (SDCWA 2015 UWMP, 2-4; DEIR Appendix D-17 at 3-4.) The regional growth projections are based on the general plans of SANDAG member governments, including planned-for growth and development provided in the general plan documents. The growth projections identify "accelerated forecasted growth," which is growth projected to occur outside the 2040 planning horizon, that could potentially move forward sooner due to general plan amendments. (SDCWA 2015 UWMP, 2-6.) The UWMP also includes "near-term annexations" in its regional baseline demand forecast, which contains projects anticipated to apply for annexation into the SDCWA service area. (SDCWA 2015 UWMP, table 2-2.) The "near-term annexations" include a list of 13 projects, as well as their projected water supply demand. (SDCWA 2015 UWMP, table 2-2.) However, the UWMP does not explain criteria used to define "near-term," or discuss the possibility of other projects that might qualify.

RO-4-101

The list of "near-term annexations" fails to include all development projects currently being considered by San Diego County Planning and Development Services ("Development Services"). For example, the Lilac Hills Ranch project would require approximately 1246 AF/yr. from SDCWA if approved and granted its requested general plan amendment. (San Diego Planning and Development Services 2019.) However, it is unclear whether such a project is considered in the SDCWA supply-demand forecasts. The EIR's failure to account for general plan amendment related growth renders its cumulative impacts analysis incomplete, violating CEQA's requirements. (14 Cal. Code. Reg. § 15130.) As San Diego County continues to encourage residential development, it is vital that individual projects consider their cumulative impacts, particularly to finite resources such as potable water.

RO-4-102

Land use planning that relies on inaccurate population growth models will continue to inaccurately project future resource demands. In the context of water supply, periodic UWMP updates will always be playing catch-up to the demand created by GPA projects approved since the most recent population projections. Each 5-year UWMP update will necessitate a recalculated supply projection for the subsequent 20-year planning horizon. At every update, the projected supply shortage will increase compared to projections relied upon by projects that were approved without consideration of GPA demand. This cycle, wherein UWMPs must retroactively account for GPA-associated demand, essentially undermines the evidence cited in support of an EIR's water supply analysis, which is critical to the County's ability to make an

informed approval decision on a given project, and for an EIR to withstand judicial scrutiny. OWD must address this issue, either by accounting for all current projects under review in its UWMP regional demand assessments, or the County should end or limit its practice of approving GPA development projects. OWD's failure to account for GPA demand undermines the validity of the UWMP, and therefore the WSAV and the County should therefore request that OWD correct the WSAV before moving forward in the CEQA process. (*California Water Impact Network v. Newhall County Water District* (2008) 161 Cal.App.4th 1464, 1487 fn. 21 ["Thus, to fulfill its usefulness and statutory aims, the lead agency would be well advised to evaluate the WSA and if the WSA is found to be incomplete or to contain inaccurate information or faulty analysis, the lead agency should request the water supplier to modify, correct or supplement the WSA"].)

D. The DEIR Fails to Properly Disclose and Analyze the Potential Impacts of the Annexation of the Project Site into OWD's Service Area.

The DEIR provides virtually no discussion of the need for the Project site (as proposed and Alternative H) to be annexed to SDCWA, MWD, and OWD before it receives a single drop of potable water. In addition to the scant mention, there is a lack of consistency between different EIR supporting documents concerning what annexation would require, leaving the reader to guess at the impacts related to annexation. The EIR states that while adequate water supply is available for the Project, the Project would likely be required to participate in an offset program so that annexation of the Project would not necessitate any new or expanded entitlements from SDCWA or MWD. (DEIR at 3.7-13.) Seven pages later, it states the "Project would be required to participate in the acquisition and development of alternative water supply project(s) to offset the proposed Project's potable water demand, as a condition of annexation to the Otay Water District." (DEIR at 3.7-20.) It is unclear what such an offset program would entail, or whether it is in fact mandatory or optional. The recently added EIR appendices that accompany Alternative H provide no mention of an offset program, only stating that the Alternative H site would require annexation "to SDCWA, MWD, and OWD in order to obtain water service." (RDEIR Appendix D-17 at 1-5.) These inconsistencies obscure the public's understanding of the steps that need to be taken to ensure sufficient water supply for the Project.

RO-4-103

An accurate and thorough water supply and demand analysis is critical to informed land use planning and sustainable development. (*Vineyard*, 40 Cal.4th 433-34; Water Code §§ 10910-12; Govt. Code § 66473.7.) This is especially true in San Diego County, where water-intensive sprawl developments like this Project are placing increasing pressure on the region's already-limited water supply. The EIR's inadequate water supply analysis and failure to adequately disclose or consider the environmental impacts of supplying water to the Project violate CEQA and the Water Code and hinder the public and decision-makers' ability to change course and embrace water-smart land use planning. The County should revise the EIR to remedy the flaws identified in this section, and recirculate the DEIR so the public is well aware of the Project's impacts on regional water supply.

RO-4-104

V. Conclusion.

RO-4-105 Thank you for the opportunity to submit comments on the EIR for the Otay Ranch Village 13 Project. We ask the County to address and correct the deficiencies we have identified above and recirculate an updated Draft EIR for public review and comment.

RO-4-106 Please ensure that the Center is on the notice list for all future updates and notices associated with the Project and its environmental review, and do not hesitate to contact the Center with any questions at the number or email listed below.

Sincerely,

Peter J. Broderick

Staff Attorney
Center for Biological Diversity
1212 Broadway, Suite #800
Oakland, CA 94612
Tel: (510) 844-7100
pbroderick@biologicaldiversity.org

/s/
Van K. Collinsworth
Geographer, Director
Preserve Wild Santee
(619) 258-7929
savefanita@gmail.com
preservewildsantee.org

/s/
Richard W. Halsey
Director
The Chaparral Institute
PO Box 545
Escondido, CA 92033
californiachaparral.org

ATTACHMENTS

Attachment 1
Letter to D. Campbell, County of San Diego Planning & Development Services, from V. Collinsworth, Preserve Wild Santee, Re Otay Ranch Village 13 Resort Village Draft EIR, SCH NO. 2004101058 (May 22, 2015).

Attachment 2
CAPCOA 2010 Quantifying Greenhouse Gas Mitigation Measures: *A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures,* available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf. (excerpt)

Attachment 3
Minute Order, Dec. 24, 2018, *Golden Door Properties LLC v. County of San Diego* (San Diego Superior Ct. Case No. 37-2018-00013324-CU-TT-CTL).

Attachment 4
Letter to G. Mattson, County of San Diego Planning & Development Services, from C. Nogano and T. Cornelisse, Center for Biological Diversity, Re Endangered Quino Checkerspot Butterfly and Otay Village 13 Project in San Diego County, California ["Quino Scientist Letter"] (May 22, 2019).

Attachment 5
USFWS, Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Quino Checkerspot butterfly (Euphydryas editha quino) (74 Fed. Reg. 28776, June 17, 2009).

Attachment 6
County of San Diego, QCB Heat Map: Positive Values and Negative Model Values (Dec. 2018).

Attachment 7
County of San Diego, QCB Heat Map: Positive Values and Negative Model Values (Dec. 2018), with Otay Ranch Resort Village 13 footprint overlay.

Attachment 8
Letter to Board of Supervisors, San Diego County, from T. Yapp, Center for Biological Diversity, Re Wildfire Impacts of Poorly-planned Development in San Diego County (Nov. 13, 2018).

Attachment 9
San Diego County Water Authority, Fiscal Year 2018 Reliability Pie Chart, 4/18/2019. Available at https://www.sdcwa.org/sites/default/files/FY%202018%20Reliability%20Pie%20Chart.jpg.

Attachment 10
San Diego County Water Authority, Reservoir Lakes Water Levels, 5/7/2019. Available at https://www.sandiego.gov/reservoir-lakes/about/water-levels.

REFERENCES

Ashton, A., Lillis, R., & Ramirez, W. (2018, August 6). 249 nights away at California fires : Firefighter families cope with a 'new normal.' *The Sacramento Bee*.

Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences*, *114*(11), 2946–2951.

Barnett, T. P., et al. (2008). Human-Induced Changes in the Hydrology of the Western United States, *Science 319*(5866), 1080-1083.

Bistinas, I., Oom, D., Sá, A. C. L., Harrison, S. P., Prentice, I. C., & Pereira, J. M. C. (2013). Relationships between human population density and burned area at continental and global scales. *PLoS ONE*, *8*(12), 1–12.

Bransford, S., Medina, J., & Del Real, J. A. (2018, July 27). Firefighters Reflect on a Job Now 'Twice as Violent'. *The New York Times*.

Brown, Edmund G. (2015). Fourth Inaugural Address as Governor of California, January 5, 2015.

Cal Fire. (2018). *Emergency Fund Fire Suppression Expenditures*.

California Chaparral Institute. (2018). *Independent external sprinklers to protect your home during a wildfire*.

Climate Action Tracker. (November 2017). Improvement in warming outlook at India and China move ahead, but Paris Agreement gap still looms large. Available at: http://climateactiontracker.org/publications/briefing/288/Improvement-in-warming-outlook-as-India-and-China-move-ahead-but-Paris-Agreement-gap-still-looms-large.html.

Climate Action Tracker, USA (last updated November 29, 2018). Available at: http://climateactiontracker.org/countries/usa.

Del Real, J. A., & Kang, I. (2018, July 30). California Today: The Increasing Strain on State Firefighters. *The New York Times*.

Delfino, R. J., Brummel, S., Wu, J., Stern, H., Ostro, B., Lipsett, M., … Gillen, D. L. (2009). The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003. *Occupational and Environmental Medicine*, *66*(3), 189–197.

Dellinger, J. (2019). *Relationship between habitat and genetics in a wide-ranging large carnivore*. Temecula, CA.

Fogarty, John & McCally, Michael (2010). Health and Safety Risks of Carbon Capture and Storage. *Journal of the American Medical Association*, *303*(1) 67-68.

Governor Newsom's Strike Force. (2019). *Wildfires and Climate Change: California's Energy Future*.

Greene, D. (2018, August 8). California Firefighters Battle Exhaustion. *National Public Radio*.

Gustafson, K. D., Gagne, R. B., Vickers, T. W., Riley, S. P. D., Wilmers, C. C., Bleich, V. C., … Ernest, H. B. (2018). Genetic source–sink dynamics among naturally structured and anthropogenically fragmented puma populations. *Conservation Genetics*, *20*(2), 215–227.

Gutierrez, M. (2018, July 31). California blazes tax budgets, firefighters: ' Fatigue is starting to set in. *SFChronicle*.

Gutierrez, M., & Cassidy, M. (2018, August 11). As California burns, volunteer firefighters become harder to find. *SFChronicle*.

IPCC [Intergovernmental Panel on Climate Change]. (2013) 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.)], Cambridge University Press.

IPCC [Intergovernmental Panel on Climate Change]. (2014). Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri & L.A. Meyer (eds.)]. Available at: http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf.

Jennings, M. (2018). *Effects of Wildfire on Wildlife and Connectivity*.

Keeley, J. E. (2005). *Fire as a threat to biodiversity in fire-type shrublands. Planning for biodiversity: bringing research and management together. USDA Forest Service General Technical Report PSW-GTR-195*.

Keeley, J. E. (2006). Fire management impacts on invasive plants in the western United States. *Conservation Biology*, *20*(2), 375–384. https://doi.org/10.1111/j.1523-1739.2006.00339.x

Keeley, J. E., & Fotheringham, C. J. (2001). Historic fire regime in southern California shrublands. *Conservation Biology*, *15*(6), 1536–1548.

Keeley, J. E., & Fotheringham, C. J. (2003). Impact of Past Present and Future Fire Regimes on North American Mediterranean Shrublands. In *Fire and climatic change in temperate ecosystems of the Western Americas* (pp. 218–262).

Keeley, J. E., Fotheringham, C. J., & Morais, M. (1999). Reexamining fire suppression impacts

on brushland fire regimes. *Science*, *284*(5421), 1829–1832.

Keeley, J. E., & Syphard, A. D. (2018). Historical patterns of wildfire ignition sources in California ecosystems. *International Journal of Wildland Fire*, *27*(12), 781.

Künzli, N., Avol, E., Wu, J., Gauderman, W. J., Rappaport, E., Millstein, J., … Peters, J. M. (2006). Health effects of the 2003 Southern California wildfires on children. *American Journal of Respiratory and Critical Care Medicine*, *174*, 1221–1228.

Le Quéré, Corrine, et al. (2017). Global Carbon Budget 2017, *Earth Syst. Sci. Data Discuss.*, https://doi.org/10.5194/essd-2017-123. Available at: http://www.globalcarbonproject.org/carbonbudget/17/data.htm.

Legislative Analyst's Office. (2017). Residential Water Use Trends and Implications for Conservation Policy. Available at: http://www.lao.ca.gov/Publications/Report/3611.

Liu, J. C., Pereira, G., Uhl, S. A., Bravo, M. A., & Bell, M. L. (2015). A systematic review of the physical health impacts from non- occupational exposure to wildfire smoke. *Environmental Research*, *136*, 120–132. https://doi.org/10.1016/j.envres.2014.10.015.A

Lundstrom, M., Kasler, D., & Lillis, R. (2017). "It's just luck - kismet." Why some people lived and others died in California fires. *The Sacramento Bee*.

Maclean, Ilya M. D. & Robert J. Wilson. (2011). Recent ecological responses to climate change support predictions of high extinction risk, 108 *PNAS* 12337.

McGough, M., Bizjak, T., Kasler, D., Sabalow, R., & Bollag, S. (2019, January 24). Tubbs Fire in Santa Rosa caused by private electrical system, not PG&E, Cal Fire says. *The Sacramento Bee*.

Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.). (2014). Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program. Available at: http://nca2014.globalchange.gov/downloads.

MWD [Metropolitan Water District of Southern California]. (2019a). March 12, 2019 Board Action Staff Report 8-1. Available at: http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739173-1.pdf.

MWD [Metropolitan Water District of Southern California]. (2019b). Draft Lower Basin Drought Contingency Operations, March 12, 2019. Available at: http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739173-1.pdf.

MWD [Metropolitan Water District of Southern California]. (2019c). Drought Contingency Plan Implementation Agreement between MWD and Coachella Valley Water District, March 12,

2019. Available at: http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739173-1.pdf.

MWD [Metropolitan Water District of Southern California]. (2019d). Drought Contingency Plan Implementation Agreement between MWD and Palo Verde Irrigation District, March 12, 2019. Available at: http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739173-1.pdf.

MWD [Metropolitan Water District of Southern California]. (2019e). Final Review Draft Lower Basin Drought Contingency Plan Agreement, March 12, 2019. Available at http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739173-1.pdf.

MWD [Metropolitan Water District of Southern California]. (2019f). Minutes Regular Meeting of the Board of Directors, March 12, 2019. Available at: http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739229-1.pdf.

Nauslar, N. J., Abatzoglou, J. T., & Marsh, P. T. (2018). The 2017 North Bay and Southern California Fires: A Case Study. *Fire, 1*(18). https://doi.org/10.3390/fire1010018

NRC [National Research Council]. (2010). Advancing the Science of Climate Change.

Osborne, K. H., & Redak, R. A. (2000). Microhabitat conditions associated with the distribution of postdiapause larvae of Euphydryas editha quino (Lepidoptera: Nymphalidae). *Annals of the Entomological Society of America*, *93*(1), 110-114.

Phuleria, H. C., Fine, P. M., Zhu, Y., & Sioutas, C. (2005). Air quality impacts of the October 2003 Southern California wildfires. *Journal of Geophysical Research*, *110*.

Pratt, G. F., & Emmel, J. F. (2010). Sites chosen by diapausing or quiescent stage quino checkerspot butterfly, Euphydryas editha quino,(Lepidoptera: Nymphalidae) larvae. *Journal of Insect Conservation*, *14*(2), 107-114.

Preston, K. L., Redak, R. A., Allen, M. F., & Rotenberry, J. T. (2012). Changing distribution patterns of an endangered butterfly: Linking local extinction patterns and variable habitat relationships. *Biological Conservation*, *152*, 280-290.

Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., … Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, *115*(13), 3314–3319.

Rappold, A. G., Cascio, W. E., Kilaru, V. J., Stone, S. L., Neas, L. M., Devlin, R. B., & Diaz-Sanchez, D. (2012). Cardio-respiratory outcomes associated with exposure to wildfire smoke are modified by measures of community health. *Environmental Health: A Global Access Science Source*, *11*(71).

Reid, C. E., Brauer, M., Johnston, F. H., Jerrett, M., Balmes, J. R., & Elliott, C. T. (2016). Critical review of health impacts of wildfire smoke. *Environmental Health Perspectives*, *124*(9), 1334–1343.

Rogelj, Joeri et al. (2016). Differences between carbon budget estimates unraveled, 6 *Nature Climate Change* 245.

Sabalow, R., Lillis, R., Kasler, D., Yoon-Hendricks, A., & Reese, P. (2018, November 25). 'This fire was outrunning us ': Surviving the Camp Fire took bravery, stamina and luck. *The Sacramento Bee*.

Safford, H. D., & Van de Water, K. M. (2014). Using Fire Return Interval Departure (FRID) analysis to map spatial and temporal changes in fire frequency on National Forest lands in California. *Pacific Southwest Research Station - Research Paper PSW-RP-266*, 1–59.

SCWA [San Diego County Water Authority]. (2019). Letter to Metropolitan Water District, March 10, 2019. Available at http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003739162-1.pdf.

San Diego County, Planning & Development Services. (May 23, 2019). Current Projects, Lilac Hills Ranch Recirculation. Available at: https://www.sandiegocounty.gov/pds/ceqa/LHR_Recirculation_2.html.

Simon, S. (2018, August 4). Constant Wildfires Leave California Firefighters Strained. *National Public Radio*.

St. John, P. (2017, December 29). Alarming failures left many in path of California wildfires vulnerable and without warning. *LA Times*.

Syphard, A. D., Brennan, T. J., & Keeley, J. E. (2018). Chapraral Landscape Conversion in Southern California. In *Valuing Chaparral* (pp. 323–346).

Syphard, A. D., Keeley, J. E., & Brennan, T. J. (2011). Comparing the role of fuel breaks across southern California national forests. *Forest Ecology and Management*, *261*(11), 2038–2048.

Syphard, A. D., Keeley, J. E., Massada, A. B., Brennan, T. J., & Radeloff, V. C. (2012). Housing arrangement and location determine the likelihood of housing loss due to wildfire. *PLoS ONE*, *7*(3), e33954.

Syphard, A. D., Massada, A. B., Butsic, V., & Keeley, J. E. (2013). Land use planning and wildfire : Development policies influence future probability of housing loss. *PLoS ONE*, *8*(8), e71708. https://doi.org/10.1371/journal.pone.0071708

Syphard, A. D., Radeloff, V. C., Hawbaker, T. J., & Stewart, S. I. (2009). Conservation threats

due to human-caused increases in fire frequency in mediterranean-climate ecosystems. *Conservation Biology*, *23*(3), 758–769. https://doi.org/10.1111/j.1523-1739.2009.01223.x

Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., … Hammer, R. B. (2007). Human influence on California fire regimes. *Ecological Society of America*, *17*(5), 1388–1402.

Syphard, A. D., Rustigian-romsos, H., Mann, M., Conlisk, E., Moritz, M. A., & Ackerly, D. (2019). The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Global Environmental Change*, *56*, 41–55. https://doi.org/10.1016/j.gloenvcha.2019.03.007

Thomas, Chris. D. et al. (2004). Extinction risk from climate change, 427 *Nature* 145.

Thompson, D. B. (2018, December 11). Cal Fire chief:State must consider ban on homes in fire-prone areas. *Associated Press*.

Tilman, D., May, R. M., Lehman, C. L. & Nowak, M. A. (1994). Habitat destruction and the extinction debt. *Nature* 371, 365–366.

Urban, Mark C. (2015). Accelerating extinction risk from climate change, 348 *Science* 571.

USFWS. (2003). Recovery Plan for the Quino Checkerspot Butterfly (*Euphydryas editha quino*).

USGCRP [U.S. Global Change Research Program]. (2017). Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J. et al. (eds.)], U.S. Global Change Research Program. Available at: https://science2017.globalchange.gov/.

Verified Petition for Writ of Mandate, filed April 16, 2019. *Imperial Irrigation District v. Metropolitan Water District* (Superior Court of Los Angeles County).

Viswanathan, S., Eria, L., Diunugala, N., Johnson, J., & Mc Clean, C. (2006). An analysis of effects of San Diego wildfire on ambient air quality. *Journal of the Air and Waste Management Association*, *56*(1), 56–67. https://doi.org/10.1080/10473289.2006.10464439

Warren, Rachel et al.. (2011). Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise, 106 *Climatic Change* 141.

Weinhold, B. (2011). Fields and forests in flames: Vegetation smoke and human health. *Environmental Health Perspectives*, *119*(9), A386–A393.

Wiens, John J. (2016). Climate-related local extinctions are already widespread among plant and animal species, 14 *PLoS Biology* e2001104.

World Resources Institute. (November 25, 2014). 6 Graphs Explain the World's Top 10 Emitters.